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70 Henry Cole Esq
1697
Department of Practical Art
Marlborough House
THIRTIETH
London

Box I,

97. E.

ANNUAL REPORT

Box. 0074

OF THE

GLASGOW

MECHANICS' INSTITUTION,

61 NORTH HANOVER STREET.

MAY, 1853.



George Richardson, Printer to the University.

Honorary Patron.
LORD BROUGHAM AND VAUX.

Vice-Patron.
JOHN LEADBETTER, Esq.

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Committee of Management.

JAMES GOURLAY, Esq., <i>President.</i>	
MR. THOMAS GORDON, <i>Vice-President.</i>	
MR. GEORGE GOOD, <i>Secretary.</i>	
MR. MUDIE MACARA, <i>Treasurer.</i>	
MR. WILLIAM M'LELLAN, <i>Superintendent.</i>	
Messrs. WILLIAM HADDOW. JAMES INGLIS. JOHN ROBERTSON. A. D. GRAY. A. H. BALD. W. H. MACFARLANE. JAMES TAYLOR. DUN. M. WEST.	Messrs. THOMAS TENNENT. JAMES WALKER. JOHN GALLETTI. THOMAS MAIN. <i>From the Councillors.</i> BAILIE GOURLAY. BAILIE WATSON. WALTER PATERSON, Esq.

W. SWANSTON, Curator and Collector of Subscriptions.

LECTURERS.

DR. FREDERICK PENNY.....	CHEMISTRY.
PROFESSOR J. SCOTT.....	NATURAL PHILOSOPHY.
DR. ALEX. LINDSAY.....	{ POPULAR ANATOMY AND PHYSIOLOGY.
MR. ROBERT HARVEY.....	MECHANICAL DRAWING.
PROFESSOR J. SCOTT.....	MATHEMATICS.
MR. RODGER HENNEDY,.....	BOTANY.

HRS

27.8.96



THIRTIETH
ANNUAL REPORT
OF THE
GLASGOW MECHANICS' INSTITUTION,
SESSION 1852-53.

THE Committee of Management of the GLASGOW MECHANICS' INSTITUTION, in presenting to the Members and friends of the Institution the THIRTIETH ANNUAL REPORT of their proceedings, have to express their regret that their exertions during the past Session to increase the list of Members, induce a more numerous attendance at the Lectures, and extend the general usefulness of the Institution, have not been crowned with that success which they were entitled to expect, and while they have been unable to discover the true cause of this general falling-off in some of the most popular Classes, they feel called upon to express their conviction, that a disposition exists on the part of the public generally, to give the preference to Lectures and Exhibitions which contribute to their general amusement, over those more solid and practically useful studies which it is the province of this Institution to elucidate and teach.

The Committee believing that the Association of Mechanics' Institutes into a Union with the Society of Arts, might materially conduce to the increased success of this Institution, availed themselves of the invitation to join the Association, and were received into that Union. No important beneficial effect has yet resulted from the Association, but when the Union has become more fully developed, they expect that this Institution will be materially benefitted thereby.

Acting on a suggestion of the Society of Arts, that a systematic interchange among Mechanics' Institutes, of specimens illustrating the manufactures of each particular district, would materially enhance the value of such Institutions, your Committee have resolved to form a collection of the productions of this neighbourhood, exhibiting the raw material and the various stages of manufacture, and also to exchange specimens of these for those of other districts, and for this purpose, have issued

circulars to the proprietors of several of the most eminent manufactories in the vicinity, requesting their aid in furnishing such specimens. In order to accommodate this collection, considerable alterations will require to be made, and expense incurred in the Apparatus Room to fit it for their proper reception, but which the Committee confidently trust the friends and well-wishers of the Institution will enable them to accomplish.

It was also in contemplation to erect an Observatory on the roof of the Institution, to contain the large Gregorian Telescope, so as to enable Members to have the use of it on all convenient occasions, but the state of the finances hitherto has prevented this being done, and it has reluctantly been abandoned for the present. The Committee hope, however, to be able to accomplish this desirable object soon.

As will be seen from the following analysis, there has been a falling-off generally in the attendance at the various classes this year as compared with last year,

CHEMISTRY,.....	Dr. Penny,.....	140	
NATURAL PHILOSOPHY,.....	Professor Scott,.....	96	
ANATOMY AND PHYSIOLOGY, ..	Dr. Alexander Lindsay,..	31	
MATHEMATICS,	Professor Scott,.....	65	
X—MECHANICAL DRAWING,.....	Mr. Robert Harvey,.....	81	X—
BOTANY,.....	Mr. R. Hennedy,.....	50	

LECTURES.

Chemistry.—Dr. F. PENNY.

The Lectures on Chemistry this Session have been principally devoted to the important and practically useful subject of "Chemical Technology," or Chemistry applied to the arts and manufactures. In the first part of the Course the General Principles and Laws of the Science were very fully expounded, and familiar explanations were given of Chemical Notation and Chemical Nomenclature. The leading and most important Chemical Manufactures in Glasgow and its vicinity were then successively explained. The sources and properties of the materials employed in each branch of manufacture, the essential operations involved in the various processes, and the nature, qualities, and uses of the several products or manufactured articles were most comprehensively and succinctly treated of. The simplest and best methods of detecting the impurities and

adulterations of various commercial salts, acids, metals, &c., &c., as well as the most approved processes for estimating their strengths and true economic values, were minutely pointed out and practically demonstrated. The students had likewise the opportunity of seeing and examining a very extensive and valuable collection of samples and specimens, both of the raw materials and of the varied manufactured productions. Throughout the Course the different subjects have been copiously illustrated by experiments, and the numerous processes were, as far as practicable, repeated in presence of the Class.

The Committee feel satisfied that this Course, although perhaps not so amusing or entertaining as lectures on general and more popular subjects, must have proved highly instructive and of great benefit to all who are interested in the chemical manufactures of this great manufacturing city.

Natural Philosophy.—Professor SCOTT.

The Committee experienced much difficulty in procuring a properly qualified party to take charge of the Natural Philosophy Class, until Professor Scott (late of Jersey) offered his services, when they at once engaged him. The fact of Mr. Scott being an entire stranger in this locality, and his talents and qualifications as a public teacher being unknown in Glasgow, your Committee believe has operated to a considerable extent in curtailing the extensive attendance on that course, which, they felt confident, the importance of the subject and abilities of the lecturer would have secured. Mr. Scott, during the whole Course, lost no opportunity and spared himself no exertion to make his Lectures as useful and instructive as possible to the members of his Class. More than one half of the Lectures were occupied in considering the equilibrium and motion of solid bodies, with illustrations of the general principles of Machinery and Structures. The remaining Lectures were occupied with the Mechanics of Elastic and Non-Elastic Fluids, giving at the same time, a description of the more important Pneumatic and Hydraulic Machines, the general properties of Heat and principles of the Steam Engine.

Anatomy and Physiology.—Dr. LINDSAY.

The Committee regret to say, that this class has not received that support which the importance of the subject so much demands. This result is in no degree attributable to the Lecturer, whose abilities as a Physician and Practical Anatomist

are well known and highly appreciated. The lectures have been fully illustrated by excellent preparations, and anatomical plates, and many important organs explained by actual dissections made in presence of the class. The class had also the benefit of a powerful dissecting Microscope, lately added to the apparatus of the Institution at the request of the Lecturer, for the better illustrating the minute anatomy of the animal tissues.

The class although not numerous was regular in attendance and attentive to their studies, and acquitted themselves to the entire satisfaction of the Lecturer.

Mathematical Class.

It affords the Committee much pleasure to know, that Professor Scott has had great satisfaction in conducting this class. Although the attendance was not numerous, yet the desire to improve evinced by the Students was truly gratifying, and their conduct in every instance exemplary. The examination papers which have been produced by those who have competed with the view of obtaining Prizes, do great credit to the individuals by whom they have been executed.

The Senior Division read the six books of Euclid, Plane Trigonometry, Theoretical and Practical—the higher parts of Elementary Algebra, with an exposition of the nature of Logarithms, and acquired facility in their practical applications.

The Junior Division read the first four books of Euclid and the fundamental Rules of Algebra, with a course of Mensuration suited to their advancement in Theoretical Geometry.

Mechanical Drawing.—Mr. ROBERT HARVEY.

The Committee are happy to report the continued increase of attendance on the Mechanical Drawing Class. This being the sixth Session since its opening by Mr. Harvey, it argues much for its importance, and the ability which he has displayed in conducting it, that the number of Students has continued to increase every year, so much so, that although the Class-Room is large and well arranged, the Committee regret they were unable to accommodate all the applicants for admission.

Mr. Harvey this Session re-delivered his course of Lectures explanatory of the Steam Engine, and on the strength of materials—exhibiting the best forms of Cast and Malleable Iron for the various strains to which they are subject in modern constructions. This part of the course appeared to give much satisfaction, as Mr. Harvey in a very felicitous manner carried

his Students along with him in his expositions of the most important details of the Engineering profession, and with which his large practice has made him so intimately acquainted.

The Lectures were amply illustrated by the Models in the Museum of the Institution, and by Diagrams prepared by the Lecturer.

Botany.

This class the Committee are happy to say has greatly increased this year, under the able superintendence of Mr. Rodger Hennedy, to whom the Committee are deeply indebted for his gratuitous services in conducting the class for the last three years.

Library.

Considerable additions have been made to the Library this year, chiefly works of the most popular Authors, and some of the more recent contributions to Science. Many donations of Books have also been received, and among others, 40 Volumes from JOHN LEADBETTER, Esq., who has for many years taken a deep interest in the prosperity of the Institution. An extensive Supplement to the Catalogue has accordingly been published, and is to be had at the Institution—Price 2d.

Mr. CRAIG'S School.

The Committee are glad to find that the Classes for Reading, Writing, and Arithmetic, opened last year by Mr. Craig, late of the Industrial Schools, have been attended with great success, so much so as to encourage Mr. Craig to further exertions.

The numbers at present attending being

Morning and Day Classes,	-	-	52
Evening Classes,	-	-	33

The Public Examination of the pupils took place on 29th ultimo, when the gentlemen present expressed by a formal vote, their highest gratification at the progress the pupils had made in their studies.

The Committee cannot conclude without adverting briefly, to the claims which the Mechanics' Institution has to increased public support.

It is scarcely possible to exaggerate the importance and value of practical Lectures on scientific subjects in a community like Glasgow, where success in business so much depends on the proper application of science to art, and to enable our artizans

to compete successfully with those of other countries, the necessity for which was so fully exemplified in the recent Exposition of the Works of all Nations.

The Mechanics' Institution contains within itself all the elements of a practical People's College, and offers to the rising generation the ready means of acquiring a solid and useful fund of information at a comparatively trifling cost, and within the reach of the humblest apprentice. That it has not been more successful, the Committee feel must be owing to the fact, that the public generally are not sufficiently alive to the true merits of the Institution.

Donors of Books, Maps, &c.

Sir Archibald Alison.	Society of Arts.
John Leadbetter, Esq.	Philosophical Society of Glasgow.
Edward Foster, Esq.	Evangelical Society.
Mr. G. Norval.	Mr. Jas. Smith. Engineer, Model.
Mr. William Spence, Patent Agent.	&c., &c.

Occupations of Students Reading in the Library.

Architects and Civil Engineers,.....	12	Masters and Managers,.....	11
Baker,.....	1	Merchants,	7
Bookbinder,	1	Mechanics, Millwrights and Engineers,.....	33
Cabinetmakers,.....	4	Optician,.....	1
Calico Printer,.....	1	Painters,.....	2
Chemists,.....	12	Plumbers,	3
Clerks,	61	Reedmaker,.....	1
Clothlappers,.....	5	Shoemaker,	1
Confectioner,	1	Smiths,.....	5
Cooper,.....	1	Slaters,.....	2
Cotton Spinner,.....	1	Starch Manufacturer,.....	1
Designers,...	9	Students,	8
Dyers,	4	Sugar Refiners,.....	2
Editor,	1	Tailors,	2
Jewellers,.....	3	Teachers,.....	3
Joiner,.....	1	Upholsterers, ...	2
Letter-press Printers,.....	3	Warehousemen,	49
Manufacturers,.....	3	No profession given,	18
Masons,.....	2		

To whom 4,938 volumes were issued during the last six months, being about 18 volumes to each reader.

Abstract of Income and Expenditure, from 1st May, 1852, till 25th April, 1853.

Dr.

To Annual Subscriptions, - - -	£128	10	0
" Sale of Tickets to the Classes, - - -	114	12	6
" Rents of Property, - - -	91	17	6
" Library Fees, Fines, and Sale of Catalogue, - - -	17	11	7
" Reading Room Fees, - - -	2	1	11
" Surplus Prize Money, - - -	10	1	6
" Proceeds of Two Lectures on "Gold," and on "Preserved Provisions," by Dr. Fenny, - - -	1	13	1
" Proceeds of Exhibition of Microscope and Lantern, - - -	2	0	0
" Interest on Account with Union Bank, - - -	0	5	4

Cr.

By Cash due the Treasurer at last Balance, - - -	£0	9	0
" Paid Lecturers, - - -	71	5	10
" Books for Library, - - -	46	10	6
" Newspapers for Reading Room, - - -	4	6	6
" Bookbinding, - - -	9	19	6
" Printing, - - -	35	5	0
" Advertising in Newspapers and Bill Posting, - - -	12	7	0
" Curator's Salary and Commission, - - -	33	14	6
" Gas and Water, - - -	15	3	2
" Ground Annual, - - -	20	12	8
" Interest on Bond, - - -	32	0	0
" Insurance, - - -	12	18	0
" Repairs, Painting, &c., - - -	413	1	0
" Apparatus, - - -	2	17	6
" Taxes, - - -	8	15	4
" Incidental Charges - - -	15	3	4
" Balance in Treasurer's Hands, - - -	5	12	7

£368 13 5

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Glasgow, 25th April, 1853.—We have examined the Treasurer's Accounts, from 1st May, 1852, to 25th April, 1853, as written on this and the seven preceding folios, and have found them correct, the balance in his hands being Five Pounds, Twelve Shillings, and Seven Pence.

EBENEZER DENNISTOUN.
WILLIAM GARDNER.
ARCHIBALD KENNEDY.

Subscriptions from May, 1852, to May, 1853.

	Ann.	Sub.		Ann.	Sub.
Sir James Anderson, -	£2	2 0	W. & J. Houldsworth, -	1	1 0
R. F. & J. Alexander & Co.,	2	2 0	John Holiday & Co, -	1	1 0
Alexr. Abercromby & Co.,	1	0 0	William Ingleton, -	0	1 0
Arnott, Cannock & Co.,	1	1 0	William Johnston, Banker,	1	1 0
George Anderson & Co.,	1	1 0	Robert Johnston, Oakbank,	1	1 0
William Baird & Co., -	2	2 0	William Johnson, -	0	10 6
James Black & Co., -	2	2 0	John King, Levernholm,	1	1 0
Black & Wingate, -	1	1 0	Thomas Kyle, -	1	1 0
James Buchanan, -	1	1 0	Robert Ker, -	1	1 0
Blackie & Son, -	1	0 0	Kaye, Findlay & Co.,	1	1 0
Blairs & Robinson, -	1	1 0	James Lumsden, -	2	2 0
S. R. & T. Brown, -	1	1 0	Alexander Lister, -	0	10 6
A. Balderston, -	0	10 6	Andrew Liddell, -	1	1 0
Bunge & Reichman, -	1	1 0	D. Laidlaw, 15 Buchanan		
Thomas Buchanan, -	0	10 6	Street, -	1	1 0
John Brown, Jun, -	0	10 6	Robert Lamond, -	0	10 6
Thomas Barclay, -	1	1 0	H. E. MacLae, -	1	1 0
Wm. Broom, -	0	10 6	John M'Callum, -	0	10 6
Robert Black, Architect,	0	10 6	John M'Andrew, -	1	1 0
J. & W. Campbell & Co.,	2	2 0	Principal Macfarlan, -	1	0 0
John & Robert Cogan, -	1	1 0	Wm. M'Laren, Son & Co.,	1	1 0
H. E. Crum, -	1	1 0	David Mackinlay, -	1	1 0
James Crum, -	1	1 0	James M'Connell, -	0	10 6
Walter Crum, -	1	1 0	D. & J. M'Donald & Co.,	1	1 0
D. Cuthbertson, -	1	1 0	Wm. Middleton & Co.,	1	1 0
James Clark, -	0	10 6	William Miller & Son, -	1	0 0
James Couper, Sen., -	0	10 6	Sir John Maxwell, -	1	0 0
John Cree, -	0	10 6	Mitchell, Allardyce, &		
C. D. Donald, -	2	0 0	Mitchell, -	1	1 0
Alexander Dunn, -	2	0 0	William Murray, -	0	10 6
William Davie, -	1	0 0	William Melkie, -	0	10 6
James Dunlop, Clyde, -	1	1 0	James Muirhead, -	0	10 6
James Dunlop & Sons,	1	1 0	S. & W. M'Culloch, -	0	10 6
John Erskine, -	0	10 6	Edward M'Whannel, -	0	10 6
William Euing, -	1	1 0	Alex. More & Son, -	0	10 6
William Falconer, -	1	1 0	Robert Napier, -	2	2 0
P. & R. Fleming, -	1	1 0	Francis Orr & Sons, -	1	1 0
John Fleming & Co., -	1	1 0	Miss Oswald, -	0	10 6
James Fairlie, of Farm,	1	1 0	Walter Paterson, -	1	1 0
John Fyfe, -	0	10 6	W. P. Paton, -	1	1 0
William Gale, -	1	1 0	John Poynter, -	1	1 0
William Gourlie & Son,	1	1 0	James Richardson, -	1	0 0
W. Govan & Son, -	1	1 0	J. & P. Robertson Reid,	1	0 0
R. & J. Garraway, -	1	1 0	Michael Rowand, -	1	1 0
R. Griffin & Co., -	0	10 6	Alexander Reid, -	0	10 6
Alexander Graham, -	1	1 0	Adam Reid, 68 St. Vincent St.	10	6
A. & A. Galbraith, -	1	1 0	John Small, -	1	1 0
Robert Gilchrist, -	0	10 6	Smith & Rodger, -	1	1 0
John Henderson, -	2	2 0	John Stewart & Co., -	1	1 0
Alexander Hastie, M.P.,	1	1 0	John Stewart, Dunlop St.,	1	1 0
Alexr. Harvey, South Wel-					
lington Place, -	1	1 0			

Subscriptions continued.

	<i>Ann. Sub.</i>		<i>Ann. Sub.</i>
The Hon. Robert Stewart,		Walker, Birrell & Co.,	1 1 0
Lord Provost, - -	2 2 0	Wingate, Son & Co., -	1 1 0
William Spence, - -	0 10 6	Thomas Wingate & Co.,	1 1 0
Moses Steven, Bellahouston	1 1 0	Watson, Thomson & Co.,	1 1 0
Alexander Smyth, -	1 0 0	John Wright, -	1 1 0
Thomas P. Stewart, -	0 10 6	Wyllie & Lochhead, -	1 0 0
W. Stevenson & Son, -	0 10 6	Miss Whyte, -	1 0 0
Charles Tennant & Co.,	5 0 0	John Wilson, Auchaniden,	1 1 0
J. & R. Taylor, -	1 1 0	Robert Whyte, -	0 10 6
Tod & M'Gregor, -	1 1 0	Hugh Wilson, -	0 10 6
Turnbull & Co., -	1 1 0	William York, -	1 1 0
C. Thomson, - -	0 10 6	J. & R. Young, -	1 1 0
J. & G. Thomson, -	1 1 0	Yule & Wilkie, -	0 10 6
J. & J. Whyte, - -	1 1 0	Friends, - -	0 5 0

DONORS OF COALS.

Messrs. James Merry, 4 Carts.
 " G. Wilson, 4 Carts.
 " A. Baird, 4 Carts.

Messrs. John M'Andrew, 4 Carts.
 " John Lamont, 2 Carts.
 " Robert Paterson, 3 Carts.

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 wood.
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GLASGOW MECHANICS' INSTITUTION.

Distribution of Prizes.

THE Thirtieth Anniversary Meeting of the Members and friends of the Institution, took place on Thursday Evening, 12th May, 1853, on the occasion of distributing the Prizes to the successful Competitors—The Hon. the Lord Provost occupied the Chair, supported by Sheriff Bell, Bailles Gourlay, Drummond, Stewart, and other influential parties, besides the the Lecturers and Teachers.

The Annual Report of the Committee for the past year having been read by the Secretary.—The Chairman after a few appropriate remarks, proceeded to distribute the Prizes as follows:—the first being a Prize of £10 10s., which was gained by James Smith, Engineer, for his working Model of an improved Blowing Engine, exhibited on the platform. On presenting the Prize, the Chairman informed the meeting, amidst much applause, that Mr. Smith had in the handsomest manner made a present of the Model to the Institution, and that it would be put in motion and explained in the course of the evening.

The "Birbeck Testimonial Prize," £2 2s.

To Mitchell King Armstrong, 6 Main Street, Anderston.

CHEMISTRY CLASS.

For the best written account of the Lectures.

1. John Stewart, 133 Dalmarnock Road.
2. { John Coulter, 45 John Street,
William Brown, 127 Brunswick Street, } Equal.
3. Mitchell King Armstrong, 6 Main Street, Anderston.

Dr. Penny hereupon made a few observations regarding the progress attained by the Class generally, and the merits of the various competitors in particular, and took that opportunity of informing the meeting, that Mr. William Euing having seen Mr. Stewart's Note Book, which has gained the first Prize, was so much struck with the great care, labour, and attention bestowed upon it, that he had put into his (Dr. Penny's) hands another Guinea, to be presented in his name to Mr. Stewart, as a farther incitement to the latter to persevere in the course he had begun so successfully. The Chairman accordingly presented this additional Prize to Mr. Stewart amidst great applause. The Note Book, which was handed round for inspection, excited much interest.

NATURAL PHILOSOPHY CLASS.

For the best written account of the Lectures.

1. Duncan M. West, 95 Crown Street, Hutchesontown.
2. William Brown, 127 Brunswick Street.

An extra Prize was also awarded to John Hamilton, 61 Dale Street, Tradeston, for an Essay on Hydraulic Machines.

ANATOMY AND PHYSIOLOGY CLASS.

1. J. T. Phillips, 13 Tarbet Street.

MATHEMATICAL CLASS.

Senior Division.

1. Alex. Finlayson, 14 West Nile Street.

Junior Division.

1. Andrew M'Donald, 30 East Market Street.
2. James Chalmers, 180 Great Hamilton Street,
3. Joseph Laird, 10 North Coburg Street,

} Equal.

MECHANICAL DRAWING CLASS.

1. Robert Stobo, 283 High Street.
2. John Murray, 15 Castle Street.
3. James Davie, 44 George Street.
4. Thomas Wallace, 24 Waterloo Place, Kingston.

Mr. Harvey made a few remarks in reference to the progress of the Drawing Class, and at the request of the Chairman, shortly explained the construction and mode of action of the Blowing Engine, which was then set in motion.

The distribution of Prizes being finished, the Chairman announced the continuation of his subscription of £5 5s. for Prizes for next Session, and called upon the Gentlemen present to follow his example, when the following were announced, Ballie Stewart, £3 3s.; Bailie Gourlay, £2 2s.; Sheriff Bell, £2 2s.; Mr. James Taylor, (for Birbeck Testimonial,) £2 2s.; Mr. Craig of Shotts, £1 1s.; Bailie Drummond, £1 1s.

Mr. SHERIFF BELL in moving the first resolution said, The resolution I have been requested to move is the following—"That the prosperity of the City of Glasgow as a commercial and manufacturing community, has been greatly advanced by the diffusion of sound useful and scientific knowledge among the various classes of her citizens."—This resolution affirms two things—First, that Glasgow is prospering, and Second, that such prosperity has been greatly promoted by the diffusion of useful knowledge among its citizens. That Glasgow is prosperous will not be doubted, when we find that her harbour revenue now approaches £80,000 per annum; that the Clyde shipping extends to one million five hundred thousand tons; that the customs amounted last year to £650,000; that the annual value of our cotton manufactures is one million two hundred and fifty thousand pounds sterling; and that the annual produce of our iron is five hundred thousand tons. In farther evidence of prosperity, we are building new bridges; we are laying out public parks; we are erecting streets, crescents, terraces, and squares by the dozen; and our population is increasing at the rate of eight or ten thousand per annum. Few modern towns have advanced so rapidly; our fathers would not know the city in which their sons are pursuing their daily avocations. There are towns which we have seen, and large ones too, where a new tenement is an object of curiosity, and a new street is reckoned a wonder. The inhabitants of those towns may be very wise and very learned, but they lag far behind us, in as far as social advancement is concerned. Then, is it true that the diffusion of useful knowledge has accelerated this prosperity, and aided this accumulation of wealth? What is the meaning of knowledge being useful? It is, that it enables us to do many things which we could not do without it. Of course the knowledge to which we allude when we say this, is not a mere acquaintance with those simple and rudimental facts which the ordinary use of

our senses makes us familiar with. That sort of intuitive information is common to all, and would never raise one man above another. Knowledge that is properly entitled to be called useful, can only be gained by long application and labour. The mental faculties must in the first place be cultivated to the utmost, and they must be directed for many a day to the study of those pursuits in which we are most desirous to excel. Do you think that our river and harbour have been improved as they have been, that our ships have been built, that our iron has been raised and made subservient to the use of man, or that our other cotton manufactures have found a market over all the world, without the application of much science, the diffusion of much knowledge? It is a goodly thing to see this magnificent city advancing in the manner it is doing, but it is a far better thing to know that a sure foundation for increasing and abiding prosperity, exists in the numerous educational institutions—in the Athenæums, the Schools of Design, the Mechanics' Institutions, the Andersonian Institutions, the Colleges and Universities, which we are proud to foster among us. It is there that the subtler spirit is first called forth, and that both the intellectual and the moral nature is elevated. Many a one who is now cheerfully engaged in the ordinary labours of life, looks back with unalloyed satisfaction to the hours he has spent within these walls, where he had an opportunity of laying in stores that have never failed him, and upon which he has often drawn with profit and with pleasure. Long may such Institutions flourish! Without them mere worldly wealth is gross and sensual, and of little worth; with them, it becomes powerful for great good. The educated artizan may not be able to attain the same place in society as the man of high descent and hereditary influence; but if he be true to himself, he will fulfil as honourable a destiny. The power of acquiring knowledge, and the consciousness of possessing kindly human feelings, is limited to no rank. I respect and I think we are all bound to respect aristocracy of birth, when it goes hand in hand with aristocracy of thought and of action; but

“Howe'er that be, it seems to me,

'Tis only noble to be good:

Pure hearts are more than coronets,

And simple faith, than Norman blood!”

With these sentiments, so hastily and imperfectly uttered, I ask you to affirm the resolution I have moved.

The resolution, which was seconded by Baillie Drummond, having been put from the Chair, was carried by acclamation.

Baillie Gourlay, in moving the second resolution, which was as follows, “That the Glasgow Mechanics' Institution affords a useful and scientific education to the working classes, at a comparatively trifling cost, and well deserves the increased patronage and support of the public,” said That although this resolution was evidently a truism, it nevertheless suggested a reflection of a somewhat discouraging kind. Why is it (he said) that, year after year, the Directors have to lament that their efforts to make the Mechanics' Institution useful to that class of our fellow-citizens (the mechanics and artizans) should be by them so meagrely supported? How can we account for the fact that thirty years ago, when Glasgow had not one half the population of the last census, Dr. Birbeck used to lecture in the Andersonian University to 500 anxious listeners, while now the largest number that has been induced to attend, with the population doubled, is only 140. He contrasted the enthusiasm with which their introduction was hailed in London, Birmingham, Manchester, Leeds, and many other towns in England, in the years 1824 and '25, encouraged by such names as Brougham, Byron, and Cobbett, with the apathy exhibited towards them now; and he endeavoured to find a reason for it in the enormous increase of cheap literature which invited the working man to find pleasure in instructing himself at home instead of seeking instruction through the medium of popular lectures; but he con-

fessed that even this did not fully account for their falling off in every town in the kingdom; he was inclined to attribute it more to the indifference felt towards them by the employers and managers of our large works, none of whom we ever saw here now; and, after paying a well merited compliment to the Directors for their zeal in conducting without reward the affairs of the Institution, he suggested the propriety of their endeavouring to interest personally the employers and managers of our machine works, of our spinning and weaving factories, and the other branches of our industry, as an encouragement to the workmen to follow their example. He could not help remarking that year after year while he had attended the distribution of prizes, he had seen the same faces on this platform, the same contributors to its funds, while scarcely one of these gentlemen had any interest (so far as their own business was concerned) in the promotion of the sciences taught in the Mechanics' Institution. It was certainly highly creditable to *them*, but it was not creditable to our engineers, our spinners, our manufacturers, our calico printers, and others engaged in mechanical pursuits, to allow an institution to struggle on with sickness almost approaching to decay. He hoped by another session to see an infusion of fresh blood thrown into it by the countenance and support of those for whose benefit mainly Mechanics' Institutions were originally established, that the Directors may have greater encouragement to continue their gratuitous labours.

The resolution, after being seconded by Baillie Stewart, was declared carried amid much applause.

Mr. Craig of Shotts, in a few appropriate remarks, moved a vote of thanks to the Donors of Books, Prizes, Subscriptions, and other Donations, seconded by Mr. John M'Harg, and carried unanimously.

Mr. George Baillie, in moving "That a vote of thanks be given to the Vice-President and Committee of Management for their zealous and efficient services during the past year," said—This is a very proper motion, but I am not sure that it becomes me to move thanks to others for doing what I *should* and *would* have done myself had I been requested to do so. Therefore instead of a long and *sterile* speech at this late hour, I think my best oration will be shortly to request the Secretary, Mr. Good to be so good as mark me down for a couple of Guineas to his Prize Fund.

Mr. John Craig, Teacher, having seconded the above motion, the same was carried with much applause.

Mr. Gordon, Vice-President, shortly returned thanks for himself and the other Members of Committee, and concluded by moving a vote of thanks to the Lord Provost for his conduct in the Chair, which was, as usual, carried amidst great applause, and the proceedings terminated.

